Erratum for NIEHS Working Group Report

Assessment of Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields

The revisions listed in this erratum are compiled from information received by the NIEHS from different individuals.

p. x — Figure 2.3: "..vector c=aXb…defined by a and b…"

p. xiv — Table 4.46: Title should read "Maximum turnover numbers of some enzymes."

Table 4.49: "…..(B_{DC})"

p. 57 — Figure 2.3: "..vector **c=aXb**…defined by **a** and **b**…"

p. 80 — Table 3.1: title should read "…exposure to electric field at…" not "…exposure to electric of magnetic fields at…"

Table 3.1: column heading reading "Organ-averaged electric field" should Read "Tissue-averaged electric field".

p. 81 — Second line above Table 3.2 should read "order of 20.0 μV/m" not "100 μ V/m." Third line above Table 3.2 should read "oriented" not "orientated".

p. 86 — Paragraph 3, line 5 should read "…2, 200, or 1000…"

Paragraph 4, line 5 should read "…31% in those at 2μT (p <0.01)" not "31% in those at 2μT (p <1.01)…"

p. 87 — Paragraph 1, next to last sentence: add text and change number from 29 to 2 to read: "...incidences of adenomas and carcinomas of the lung were significantly lower in males...and females (2/99)...."

p. 178 — Paragraph 3: The 95% CI of the risk estimate of the German study is 0.8-6.7 (as shown in table 4.21), not 1.2-12 (this is the CI regarding the median during the night). Moreover, the risk for Berlin was 1.2 (95%-CI, 0.2-5.6), the OR shown on page 178 was calculated only for the Eastern sector of the city.

p. 185 — Paragraph 3, last line "leukemia (OR=1.5: 95% CI, 1.0-2.2)" should read "leukemia (OR=1.4; 95% CI, 1.0-2.0)."

p. 186 Paragraph 1, last line “leukemia (OR=1.6; 95% CI, 0.8-3.0)” should read (OR=1.6; 95% CI, 1.0-2.7).”

p. 187 Paragraph 2, last sentence “leukemia (OR=1.2; 95% CI, 0.7-2.1)” should read “(OR=1.3; 95% CI, 0.8-2.0).”

p. 197 Table 4.2.1 (continued): The heading for the section listing Verkasalo *et al*. (1993, 1994) should read “Calculated fields” not “Studies wire codes.”

p. 198 Table 4.2.1 (continued): The heading for the section listing Michaelis *et al.* (1997b) should be titled “Studies with measurements” not “Studies wire codes.”

“Michaelis et al. (1997a)” should be “Michaelis et al. (1998).” It should be mentioned that the combined analysis from Michaelis 1998 comprise 457 study participants from the earlier study in Lower Saxony (published in Michaelis 1997) and only 133 “new” study participants from a second study in Berlin.

p. 199 Table 4.2.1: The heading for the section listing Linet *et al*. (1997) should be titled “Studies with measurement” not “Studies wire codes”.

p. 207 Table 4.26, column 1, line 3 “Measured Fields (24h and spot)”

p. 210 Paragraph 3, line 9-10 “…of exposure, followed by no change after 8 weeks and a decrease…”

p. 213 Table 4.27: House et al., 1996, in all columns “10 mT” should be 1 mT.”

p. 252 Table 4.34: Selmaoui & Touitou, 1995, the intensities studied are “1, 10, 100 µT for 12h” and the effect is seen at 100 µT.

p. 277 Paragraph 1, line 2 " ... Disorders and Stroke-"

Line 8 " ... hospital patients without neurological..."

Line 10 "... the California series. Information on... "

Line 18 "... are above the 50th percentile..."

p. 277 Paragraph 3, line 3 "probable Alzheimer disease diagnosed ..."

p. 287 Paragraph 10: “…cardiovascular disease.”

p. 339 Paragraph 4: Change "(Blackman *et al*., 1998)" to (Blackman *et al*., 1998a)."

p. 349 Paragraph 2: Change "(Blackman *et al*., 1998)" to "(Blackman et al., 1998b)."

p. 358 Paragraph 3, "…moments ρ of molecules due to…" should read "…moments ρ of entire cells due…"

p. 359 Paragraph 2, line 4 should read "Figure 2.2."

p. 360 Paragraph 4, line 2 should read "…the maximum turnover numbers of…"

p. 361 Paragraph 2, should begin "One possible approach…"

p. 362 Paragraph 1, line 2 should read "…precisely in the same…"

p. 363 Line 9 under equation 4.8, should read "$V_n = 2.8 \times 10^{-5}$ V" not "$v_n = 2.8 \times 10^{-5}$"

p. 365 Last paragraph, line 8 should read " …standard deviation, σ, …"

p. 366 First line should read "…described by its spectrum…"

Paragraph 3, line 6, should read "The principal limitation of this analysis is the assumption that only deviations from unperturbed conditions in the total quantity of accumulated substance can be detected."

p. 367 Paragraph 2, line 7 should read "The constant, A, is…"

Paragraph 3, line 12 should read "(e.g. 2C =D + E)…"

p. 368 Paragraph 1, line 6 should read "…generalized, as by Weaver…"

Paragraph 3, line 6 should read "… of ELF electric fields…"

Paragraph 4, line 1 should read "…from equation (B) on Figure 2.2."

p. 371 Paragraph 4, line 1 should read "…equation (a) on Figure 2.2, a charge…"

p. 372 Paragraph 2, line 7 should read "…(Table 4.49)."

p. 374 Paragraph 3 for this reference [Blackman, In press #1788] should be changed to (Blackman *et al*.,1998b).

Paragraph 4, Blackman *et al*., 1998 reference should be designated "(1998b)."

p. 376 Paragraph 2, line 9 should read "…(a) on Figure 2.2…"

Paragraph 5, line 3 should read "moments of ~10^{-12} A m^2…"

p. 379 Paragraph 2, line 6 should read "…involving dynamic signaling."

p. 382 Paragraph 2, line 3 should read "…or cells (≤ 10^{-3} V/m)…"

Paragraph 2 line 5 should read "electric field is ≤10^{-3} V/m…"

Paragraph 2 line 9 should read "… biogenic magnetite."

Paragraph 4, line 6 should read "Additionally, biological signal…"

p. 383 Last line should read "the duration of exposure to fields that is necessary to produce specific effects."

p. 384 Last line should read "…biological signal processing."

p. 391 Table 4.46 title should read "Maximum turnover numbers of some enzymes."

Table 4.48 title should read " Average endogenous fields due to heart activity."

Table 4.48 "Induced field (mV/m)"

Table 4.48 0-40 Hz, 40-70 Hz, 70-100 Hz

p. 392 Table 4.49 column heading 5, should read " f_R (Hz)."

p. 396 Paragraph 3, line 1 "…carcinogenic to humans (Group 2B, Appendix A)."

p. 400 Paragraph 10, "Because of the complexity of the electromagnetic…disease endpoints studied," move to page 402, Section 5.3.

p. 402 Paragraph 3, line 3 "…there was 1 abstention…"

p. 403 6 References: Missing citation
Blackman, C.F., Benane, S.G., & House, D.E. (1998a). The influence of magnetic fields on tamoxifen-induced inhibition of MCF-7 cell growth. Submitted to NIEHS RAPID Working Group.

p. 409 Reference correction: Blackman, C.F., Blanchard, J.P., Benane, S.G., House, D.E. & Elder, J.A. (1998)… "should be"…(1998b)…"

p. 438 Reference correction: McCann, J., Dietrich, F. & Rafferty, C. (1998). The genotoxic potential of electric and magnetic fields – An update. Mutation Research, 411, 45-86.

p. 467 7 Abbreviations
"B… flux density" should read "B… magnetic flux density"

"CI…confidence interval"

"GM…geometric mean"

"JEM…job-exposure matrix"

"TWA…time weighted average"

p. 471 8 Glossary
"Axial ratio …for a single frequency…" should read "…axes of the field vector trace at a single frequency."

"Electromagnetic fields…"

"Hazard surveillance…health hazard…"

"Magnitude…Vector magnitude"

"Semi-major axis…"

"Semi-minor axis…"

"Static field …but their frequency spectra has a…" should read "…but their frequency has a…"

"Vector components …The length of a vector when it is projected onto…" should read "… The lengths of the projections of a vector onto…"

"Vector magnitude …EMF vector…" should read "… EMF vector (equal to the square-root of the sum of the squares of the three orthogonal components)."

p. 477 Table 8.1 Units
"Magnetic flux density…1 mT=10 G and 1 μT=10 mG."

Units, International System (SI): "$B=\omega_0 H$ where $\omega_0=4$"x10^{-7} T-m/A" should read "$B=\mu_0 H$ where $\mu_0=4\pi x10^{-7}$ T-m/A

p. 508 Appendix B: Reference for Welsch is incorrect.
Welsch, C.W., Goodrich-Smith, M., Brown, C.K., Miglorie, N. & Clifton, K.H. (1981). Effect of an estrogen antagonist (tamoxifen) on the initiation and progression of γ-irradiation-induced mammary tumors in female Sprague-Dawley rats. European Journal of Cancer and Clinical Oncology, 17, 1255-1258.